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Disney Uses Big Data, IoT And Machine Learning To Boost Customer Experience

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Disney is known for fiercely protecting the magic behind the curtain that makes the "Most Magical Place on Earth" hum. Even though we may not know all their secrets, we do know Disney masterminds are leveraging Big Data in innovative ways to improve the experience of those who walk through the gates of their parks. There are also some intriguing developments with using data that will excite Disney movie fans. Let's take a look at how big data is changing the entertainment behemoth of Disney.

The Magic of MagicBands

In 2013, after years of development and testing, Disney World launched its MyMagicPlus program. Now, every guest to Disney World gets a MagicBand, a wristband that is equipped with RFID technology and a long-range radio. These bands communicate with thousands of sensors

and stream real-time data to hundreds of systems that make the entertainment venue a giant computer. All this data is designed to help Disney cast members anticipate all your desires so they can give you an incredible experience. The bands act as hotel keys, credit cards, tickets, FastPasses and more. With a simple swipe of the band across sensors located throughout the park, the giant system knows where you are, what you're doing and what you need.

The goal of the tech team who developed the MagicBands was to "root out all the friction within the Disney World experience." Even before you leave town you can set reservations for certain attractions (where you won't have to wait in line—hallelujah!) And added bonus for Disney: Your choices get added to its data vault. Once you arrive on site, one of the biggest challenges of any amusement park is how to minimize the wait times for rides and attractions. When people are waiting in line, they aren't spending money on food or shopping. As each guest swipes their band at a ride, vital intel is being shipped real-time to the operations team. This allows decisions to be made about adding staff or incentivizing guests to head to another ride or attraction. This re-rerouting of guests makes more efficient use of the park and even allows for exemplary customer service to be delivered. As data fuels a better experience, the trepidation and creepiness of machines knowing so much about you, melts away as families experience a trip of a lifetime.
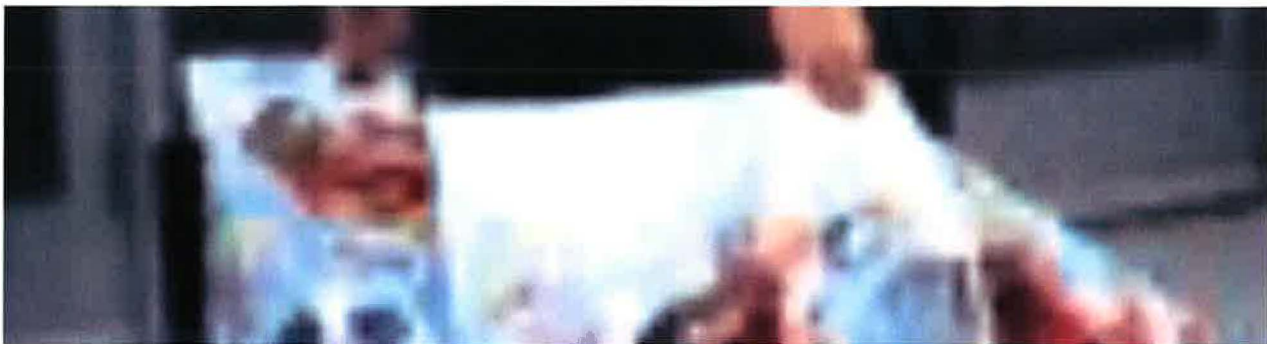
Photographer: Patrick T. Fallon/Bloomberg

Imagine all the possibilities. A family pre-orders dinner from their hotel room, and when they arrive at the restaurant not only are they greeted enthusiastically—and by name—their food is instantly delivered. All of this transpires because the system triangulates the family's location and alerts the wait staff of their arrival.

The possibilities for improving the experience of Disney guests are endless.

Your favorite Disney character could find you and greet your child by name. Candid photos of your family enjoying the park can be taken throughout the day and sent to your hotel room each night. What if you wait too long in a line? The system knows and could deliver you a free voucher for your trouble. That's a sure-fire way to turn a frown upside down; figuring out how to turn a negative experience into a positive one is the holy grail of customer service.

Recognizing Customers by the Soles: Next Generation Experience Project

Last year, Disney applied for a patent for a system that would allow them to recognize guests at a number of locations via their shoes through sensors and camera-toting robots. The goal would be to potentially offer customized guest experiences at those points. This is just the next phase of the Next Generation Experience project that aims to create "more immersive, more seamless, and more personal experiences for each and every guest." The more data Disney collects it can improve operational efficiency such as in the scheduling of 240,00 shifts for 80,000 employees each week, the better it is able to target marketing because the preferences and behaviors of past guests are used to create future packages and offers specific to them and Disney is even dabbling at making robotic versions of Mickey and Minnie and all of its characters that would move around among the guests and interact with them.

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Sentiment-Analysis Cameras Customize the Movies

Future generations of blockbuster movies might be determined based on the ability to re-shape content during the film based on viewers' reactions. Disney Research is already tracking reactions of audiences through a neural network it has developed which is helping the company quantify how a film is working on a granular scale. While studios have used test audiences to preview early cuts of films for years and would make changes based on that feedback, the difference with today's methods is the amount of data that can be analyzed. It is expected that these sentiment-analysis cameras would also make its ways into other experiences such as at the parks or restaurants.

Disney's board of directors has some heavy tech players such as Sheryl Sandberg, COO of Facebook, Jack Dorsey, founder of Twitter, and John Chen, CEO of Blackberry, so there's no doubt the entertainment icon will continue to be a leader in using machine learning and big data to enhance the customer experience.

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